Supplemental Materials and Methods Tables

Table S1: Compounds Used and Concentrations

|  |  |  |  |
| --- | --- | --- | --- |
| Compound | Supplier | Identifier | Concentration |
| Acycloguanosine | Millipore Sigma | A4669 | 10 µM, 50 µM |
| FUDR | Millipore Sigma | F-0503 | 20 µM |
| Uridine | Millipore Sigma | U-3003 | 20 µM |
| SP600125 | Millipore Sigma | S5567 | 20 µM |
| GNE-3511 | Millipore Sigma | 533168 | 4 µM |
| GSK-J4 | Millipore Sigma | SML0701 | 2 µM |
| L-Glutamic Acid | Millipore Sigma | G5638 | 3.7 µg/mL |
| Forskolin | Tocris | 1099 | 60 µM |
| LY 294002 | Tocris | 1130 | 20 µM |
| 666-15 | Tocris | 5661 | 2 µM |
| SQ 22,536 | Tocris | 1435 | 50 µM |
| KT 5720 | Tocris | 1288 | 3 µM |
| TEA | Tocris | 3068 | 10 mM |
| CsCl | Tocris | 4739 | 3 mM |
| OG-L002 | Tocris | 6244 | 30 µM |
| S2101 | Tocris | 5714 | 20 µM |
| Tetrodotoxin | Tocris | 1069 | 1 µM |
| ESI-09 | Tocris | 4773 | 10 µM |
| ZD 7288 | Cayman | 15228 | 20 µM |
| 8-bromo-cyclic AMP | Cayman | 14431 | 125 µM |
| NGF 2.5S | Alomone Labs | N-100 | 50 ng/mL |
| Primocin | Invivogen | ant-pm-1 | 100 µg/mL |
| AphidicolinIL-1β | AG ScientificShenandoah Bio. | A-1026100-167 | 3.3 µg/mL30ng/mL |
| WAY-150138Anti-Mouse IL-1RFura-2, AMHoescht | Pfizer/GiftLeinco TechnologiesThermo FisherThermo | NAI-736F122162249 | 10 µg/mL2 µg/mL5 µM2uM |

Table S2: Primers Used for RT-qPCR

|  |  |  |
| --- | --- | --- |
| Primer | Sequence 5’ to 3’ |  |
| mGAP 1SF | CAT GGC CTT CCG TGT GTT CCT A |  |
| mGAP 1SR | GCG GCA CGT CAG ATC CA |  |
| ICP27 F | GCA TCC TTC GTG TTT GTC ATT CTG |  |
| ICP27 R | GCA TCT TCT CTC CGA CCC CG |  |
| ICP8 1SF | GGA GGT GCA CCG CAT ACC |  |
| ICP8 1SR | GGC TAA AAT CCG GCA TGA AC |  |
| ICP4 F | TGC TGC TGC TGT CCA CGC |  |
| ICP4 R | CGG TGT TGA CCA CGA TGA GCC |  |
| UL30 F | CGC GCT TGG CGG GTA TTA ACA T |  |
| UL30 R | TGG GTG TCC GGC AGA ATA AAG C |  |
| UL48 F | TGC TCG CGA ATG TGG TTT AG |  |
| UL48 R | CTG TTC CAG CCC TTC ATG TT |  |
| gC F | GAG TTT GTC TGG TTC GAG GAC |  |
| gC R | ACG GTA GAG ACT GTG GTG AA |  |

Table S3: Antibodies Used for Western Blotting and Concentrations

|  |  |  |  |
| --- | --- | --- | --- |
| Antibody | Supplier | Identifier | Concentration |
| Rb Phospho-Akt (S473) | CST | 4060 | 1:500 |
| Rb Akt (pan) | CST | C67E7 | 1:1000 |
| Rb Phospho-c-Jun (S73) | CST | 3270 | 1:500 |
| Anti-DLK/MAP3K12 | Thermo Fisher | PA5-32173 | 1:500 |
| Ms Monoclonal α-Tubulin | Millipore Sigma | T9026 | 1:2500 |
| HRP Goat Anti-Rabbit IgG Antibody (Peroxidase) | Vector | PI-1000 | 1:10000 |
| HRP Horse Anti-Mouse IgG Antibody (Peroxidase) | VectorThermo Fisher | PI-2000PA5-32173 | 1:100001:500 |

Table S4: Antibodies Used for Immunofluorescence and Concentrations

|  |  |  |  |
| --- | --- | --- | --- |
| Antibody | Supplier | Identifier | Concentration |
| Rb H3K9me3S10P  | Abcam | ab5819 | 1:250 |
| Ch Beta-III TubulinMs γH2A.XMs c-Fos | Millipore sigmaCSTNovus | AB935480312SNB110-75039 | 1:10001:1001:125 |
| F(ab’)2 Goat anti Mouse IgG (H+L) Alexa Fluor® 647 | Thermo Fisher | A21237 | 1:1000 |
| F(ab’) Goat anti Rabbit IgG (H+L) Alexa Fluor® 555 | Thermo Fisher | A21425 | 1:1000 |
| Goat anti Chicken IgY (H+L) Alexa Fluor® 647Goat Anti-Chicken IgY H&L (Alexa Fluor® 488) preabsorbedF(ab’)2 Goat anti-Rabbit IgG (H+L) Alexa Fluor® 488) | abcamabcamThermo Fisher | ab150175ab150173B40922 | 1:10001:10001:1000 |

Table S5: Cell Body Score for Neuronal Health and Degeneration Index

|  |  |
| --- | --- |
| Score | Description |
| 0 | Large, phase bright cell bodies. Clear with no fragmentation or vesiculation.  |
| 1 | Small, phase bright cell bodies. Clear with no fragmentation or vesiculation. |
| 2 | Cell bodies do not have fragmentation but are not phase bright. Sometimes appear transparent. |
| 3 | Cell bodies with fragmentation but few dead neurons or corpses. |
| 4 | Cell bodies with fragmentation with many corpses present and neurons starting to detach. |
| 5 | Complete cell death. Neurons detached.  |

Table S6: Axon Score for Neuronal Health and Degeneration Index

|  |  |
| --- | --- |
| Score | Description |
| 0 | Axons totally smooth with no blebbing or fragmentation. Branched and form a spider web-like network. |
| 1 | Axons smooth but grow straight. |
| 2 | Blebbing on the axons but no apparent fragmentation. |
| 3 | Fragmentation starting to appear in <50% of the neurons. |
| 4 | Fragmentation in >50% of the neurons. |
| 5 | No axons remaining. |